

# Notice of Allowability

Application No.

10/627,483

Examiner

Thomas McKenzie, Ph.D.

Applicant(s)

WU ET AL.

Art Unit

1624

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE and declaration of 10/3/05.
2. ☒ The allowed claim(s) is/are 3-5 and 8-11.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 1/21/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Thomas C. McKenzie, Ph.D.  
Primary Examiner  
Art Unit 1624

**DETAILED ACTION**

1. This action is in response to amendments filed on 10/3/05. Applicant has canceled claims 6 and 7. There are seven claims pending and seven under consideration. Claims 3-5 and 8-11 are method of making claims. This is the fourth action on the merits. The application concerns some syntheses of quinazoline compounds.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/3/05 has been entered.

***Response to Amendment***

3. The declaration by Dr. Kochat under 37 CFR 1.132 filed 10/3/05 is sufficient to overcome the rejection of claims 3-5 and 8 based upon obviousness over Yan (J. Heterocyclic Chem.) in view of House (Modern Synthetic Reactions, Second edition) as described in point #10 of the Final Rejection. Applicants provide evidence that a Horner-Wadsworth-Emmons reaction on a quinazoline aldehyde proceeded in higher yield than a Wittig reaction on a formyl benzoate and gave an easier worked up because the products of the Horner-Wadsworth-Emmons

were water soluble as opposed to the intractable triphenylphosphine oxide byproduct of the Wittig reaction. The ease of work-up of Horner-Wadsworth-Emmons reactions is well known and is not unexpected. The Evidence for this is provided by Name Reactions (Organic Chemistry Portal). Applicants' two comparison reactions are not comparing apples with apples. Why not make the Wittig ylide from p-bromomethylbenzoate ethyl ester with the quinazoline aldehyde so a fair side-by-side comparison can be made? However, Applicants state that none of their contract manufactures suggested the Horner-Wadsworth-Emmons reaction and there are no examples of a Horner-Wadsworth-Emmons on a pteridine or quinazoline aldehyde. Horner-Wadsworth-Emmons are normally used on aldehydes to make  $\alpha$ - $\beta$ -unsaturated esters, not the simple olefin as found in the comparison experiment. As such there would be no suggestion in the literature to try such a process.

4. The declaration by Dr. Kochat under 37 CFR 1.132 filed 10/3/05 is sufficient to overcome the rejection of claims 9-11 based upon obviousness over Yan (J. Heterocyclic Chem.) in view of House (Modern Synthetic Reactions, Second edition) as described in point #11 of the Final Rejection. For reasons discussed above.

***Statement of Reasons for Allowance***

5. Claims 3-5 and 8-11 are allowed. The following is an Examiner's statement of reasons for allowance: Applicants argument concerning the new matter in the final line of claim 3 is persuasive. While this does not appear *in haec verba* in the specification as filed, Example 7 does exemplify a reduction step. Thus, the concept of "reducing said product to form the compound of formula Ib" does exist in the specification. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

6. Information regarding the status of an application should be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). All Post-Allowance correspondence concerning this application must be mailed to the following address:


Box Issue Fee

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Commissioner for Patents  
Washington, DC 20231.

Such correspondence (amendments under 37 CFR 1.312, IDS statements, formal drawings etc) also may be faxed to the Office of Patent Publications at (703) 308-5083. Sending Post-Allowance papers to Technology Center 1600 will only cause delays in matching papers with the case.

  
Thomas C. McKenzie, Ph.D.  
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Art Unit 1624